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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,018	07/14/2003	Satoshi Fujimine	240084US0	4020

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EXAMINER

ZIMMERMAN, GLENN

ART UNIT PAPER NUMBER

2879

DATE MAILED: 04/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

HA

Office Action Summary	Application No. 10/618,018	Applicant(s) FUJIMINE ET AL.	
	Examiner Glenn Zimmerman	Art Unit 2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 10-20 is/are rejected.
- 7) ☒ Claim(s) 6-9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

Amendment, filed on January 18, 2005, has been entered and acknowledged by the examiner.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the plasma display device comprising a glass substrate comprising a front substrate and transparent electrodes formed on the glass substrate, wherein the transparent electrodes are covered by the glass of claim 8 for covering electrodes must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering

of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 4 and 10-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Fukushima et al. U.S. Patent 6,555,594.

Regarding claim 1, Fukushima et al. disclose a glass for covering electrodes **(the examiner believes that "for covering electrodes" is intended use language and has therefore not been given patentable weight)**, which consists essentially of, as represented by mass percentage based on the following oxides, from 35 to 55% of PbO, from 15 to 30% of B₂O₃, from 4 to 15% of SiO₂, from 20 to 44% of B₂O₃+ SiO₂,

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from 0.5 to 10% of $\text{TiO}_2 + \text{ZrO}_2 + \text{La}_2\text{O}_3 + \text{Ta}_2\text{O}_5$, from 0 to 15% of Al_2O_3 , from 0 to 25% of BaO , from 0 to 1% of CuO and from 0 to 1% of CeO_2 (**col. 14 lines 34-40**).

Regarding claim 2, Fukushima et al. disclose the glass for covering electrodes according to claim 1, wherein the content of Al_2O_3 is from 1 to 10%, and the content of BaO is from 12 to 20% (**col. 14 lines 34-40**).

Regarding claim 4, Fukushima et al. disclose the glass for covering electrodes according to claim 1, wherein the glass has a softening point of from 520 to 650°C (**col. 14 line 40**).

Regarding claim 10, Fukushima et al. disclose the glass for covering electrodes according to claim 1, wherein the content of PbO is at least 40% and at most 50% (**col. 14 lines 34-40**)).

Regarding claim 11, Fukushima et al. disclose the glass for covering electrodes according to claim 1, wherein the content B_2O_3 is at least 18% and at most 28% (**col. 14 lines 34-40**)).

Regarding claim 12, Fukushima et al. disclose the glass for covering electrodes according to claim 1, wherein the content of SiO_2 is at least 4.5% and at most 12%. (**col. 14 lines 34-40**)).

Regarding claim 13, Fukushima et al. disclose the glass for covering electrodes according to claim 1, wherein the $\text{B}_2\text{O}_3 + \text{SiO}_2$ content ranges from 25 to 40% (**col. 14 lines 34-40**)).

Regarding claim 14, Fukushima et al. disclose the glass for covering electrodes according to claim 1, wherein the $\text{TiO}_2 + \text{ZrO}_2 + \text{La}_2\text{O}_3 + \text{Ta}_2\text{O}_5$ content ranges from 1 to 7% **((col. 14 lines 34-40))**.

Regarding claim 15, Fukushima et al. disclose the glass for covering electrodes according to claim 1, wherein Al_2O_3 is present in the glass in an amount that is at least 1% and at most 8% **((col. 14 lines 34-40))**.

Regarding claim 16, Fukushima et al. disclose the glass for covering electrodes according to claim 1, wherein BaO is present in the glass in an amount that is at least 1% and at most 20% **(col. 14 lines 34-40)**.

Regarding claim 17, Fukushima et al. disclose the glass for covering electrodes according to claim 1, wherein the glass has a softening point of from 450 to 650°C **(col. 14 line 40)**.

Regarding claim 18, Fukushima et al. disclose the glass for covering electrodes according to claim 1, wherein the glass has a softening point of from 550 to 620°C **(col. 14 line 40)**.

Claims 1, 4 and 10-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Hwang U.S. Patent Application publication 2001/0024582.

Regarding claim 1, Hwang discloses a glass for covering electrodes **(the examiner believes that “for covering electrodes” is intended use language and has therefore not been given patentable weight)**, which consists essentially of, as represented by mass percentage based on the following oxides, from 35 to 55% of PbO , from 15 to 30% of B_2O_3 , from 4 to 15% of SiO_2 , from 20 to 44% of $\text{B}_2\text{O}_3 + \text{SiO}_2$,

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from 0.5 to 10% of $\text{TiO}_2 + \text{ZrO}_2 + \text{La}_2\text{O}_3 + \text{Ta}_2\text{O}_5$, from 0 to 15% of Al_2O_3 , from 0 to 25% of BaO , from 0 to 1% of CuO and from 0 to 1% of CeO_2 . **(see Table 4).**

Regarding claim 4, Hwang discloses the glass for covering electrodes according to claim 1, which has a softening point of from 520 to 650°C **(paragraph 77; claim 30 or 50).**

Regarding claim 10, Hwang disclose the glass for covering electrodes according to claim 1, wherein the content of PbO is at least 40% and at most 50% **(Table 4; one must choose the correct percentages).**

Regarding claim 11, Hwang disclose the glass for covering electrodes according to claim 1, wherein the content B_2O_3 is at least 18% and at most 28% **(Table 4; one must choose the correct percentages).**

Regarding claim 12, Hwang disclose the glass for covering electrodes according to claim 1, wherein the content of SiO_2 is at least 4.5% and at most 12%. **(Table 4; one must choose the correct percentages).**

Regarding claim 13, Hwang disclose the glass for covering electrodes according to claim 1, wherein the $\text{B}_2\text{O}_3 + \text{SiO}_2$ content ranges from 25 to 40% **(Table 4; one must choose the correct percentages).**

Regarding claim 14, Hwang disclose the glass for covering electrodes according to claim 1, wherein the $\text{TiO}_2 + \text{ZrO}_2 + \text{La}_2\text{O}_3 + \text{Ta}_2\text{O}_5$ content ranges from 1 to 7% **(Table 4; one must choose the correct percentages).**

Regarding claim 15, Hwang disclose the glass for covering electrodes according to claim 1, wherein Al_2O_3 is present in the glass in an amount that is at least 1% and at most 8% **(Table 4; one must choose the correct percentages)**.

Claims 1, 3, 5, 10-15, 19 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Axtell, III et al. U.S. Patent 6,238,847.

Regarding claim 1, Axtell, III et al. discloses a glass for covering electrodes **(the examiner believes that “for covering electrodes” is intended use language and has therefore not been given patentable weight)**, which consists essentially of, as represented by mass percentage based on the following oxides, from 35 to 55% of PbO , from 15 to 30% of B_2O_3 , from 4 to 15% of SiO_2 , from 20 to 44% of $\text{B}_2\text{O}_3 + \text{SiO}_2$, from 0.5 to 10% of $\text{TiO}_2 + \text{ZrO}_2 + \text{La}_2\text{O}_3 + \text{Ta}_2\text{O}_5$, from 0 to 15% of Al_2O_3 , from 0 to 25% of BaO , from 0 to 1% of CuO and from 0 to 1% of CeO_2 . **(col. 3 lines 63-67 and col. 4 lines 1-2; one must choose the correct percentages)**

Regarding claim 3, Axtell, III et al. discloses the glass for covering electrodes according to claim 1, wherein CuO is contained, and the content of TiO_2 is from 0 to 4.5%. **(col. 3 lines 63-67 and col. 4 lines 1-2; one must choose the correct percentages)**.

Regarding claim 5, Axtell, III et al. discloses a colored powder for covering electrodes, which comprises a powder of the glass for covering electrodes as defined in claim 1 and a pigment **(col. 4 lines 25-30)**.

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Regarding claim 10, Axtell, III et al discloses the glass for covering electrodes according to claim 1, wherein the content of PbO is at least 40% and at most 50% (**col. 3 lines 63-67 and col. 4 lines 1-5; one must choose the correct percentages**).

Regarding claim 11, Axtell, III et al discloses the glass for covering electrodes according to claim 1, wherein the content B₂O₃ is at least 18% and at most 28% (**col. 3 lines 63-67 and col. 4 lines 1-5; one must choose the correct percentages**).

Regarding claim 12, Axtell, III et al disclose the glass for covering electrodes according to claim 1, wherein the content of SiO₂ is at least 4.5% and at most 12%. (**col. 3 lines 63-67 and col. 4 lines 1-5; one must choose the correct percentages**).

Regarding claim 13, Axtell, III et al. disclose the glass for covering electrodes according to claim 1, wherein the B₂O₃+SiO₂ content ranges from 25 to 40% (**col. 3 lines 63-67 and col. 4 lines 1-5; one must choose the correct percentages**).

Regarding claim 14, Axtell, III et al. disclose the glass for covering electrodes according to claim 1, wherein the TiO₂+ZrO₂+La₂O₃+Ta₂O₅ content ranges from 1 to 7% (**col. 3 lines 63-67 and col. 4 lines 1-5; one must choose the correct percentages**).

Regarding claim 15, Axtell, III et al. disclose the glass for covering electrodes according to claim 1, wherein Al₂O₃ is present in the glass in an amount that is at least 1% and at most 8% (**col. 3 lines 63-67 and col. 4 lines 1-2; one must choose the correct percentages**).

Regarding claim 19, Axtell, III et al. disclose the glass for covering electrodes according to claim 1, wherein the glass has a relative dielectric constant ϵ at 1 MHz of from 10.8 to 13 (**col. 3 lines 63-67 and col. 4 lines 1-2; one must choose the correct**

percentages). The examiner believes since Axtell, III et al. disclose all possible combinations of claim 1, then it will possess this particular dielectric constant value.

Regarding claim 20, Axtell, III et al. disclose the glass for covering electrodes according to claim 1, wherein the glass has a light transmittance of light at 550 nm of at least 72%. The examiner notes in the applicant's specification that 30 to 32 microns (page 14 lines 17 and 18) will allow for this limitation of the glass of claim 1. The examiner notes that Axtell uses a layer of 0.1 microns which surely will meet the limitations of claim 20 as less thickness than that used in the applicant's specification will yield greater transmittance (**col. 7 lines 30-35**). The reference does not disclose any color changing by irradiating the glass only that it becomes adhesive (**col. 7 line 60**).

Claims 1, 10-15, 17 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Grabowski et al. U.S. Patent 4,824,809.

Regarding claim 1, Grabowski et al discloses a glass (**claim 1**) for covering electrodes (**the examiner believes that "for covering electrodes" is intended use language and has therefore not been given patentable weight**), which consists essentially of, as represented by mass percentage based on the following oxides, from 35 to 55% of PbO, from 15 to 30% of B₂O₃, from 4 to 15% of SiO₂, from 20 to 44% of B₂O₃+ SiO₂, from 0.5 to 10% of TiO₂+ZrO₂+La₂O₃+Ta₂O₅, from 0 to 15% of Al₂O₃, from 0 to 25% of BaO, from 0 to 1% of CuO and from 0 to 1% of CeO₂. (**Claim 1**).

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Regarding claim 10, Grabowski et al discloses the glass for covering electrodes according to claim 1, wherein the content of PbO is at least 40% and at most 50% **(Claim 1; 50%)**.

Regarding claim 11, Grabowski et al discloses the glass for covering electrodes according to claim 1, wherein the content B₂O₃ is at least 18% and at most 28% **(Claim 1; 18%)**.

Regarding claim 12, Grabowski et al disclose the glass for covering electrodes according to claim 1, wherein the content of SiO₂ is at least 4.5% and at most 12%. **(Claim 1; 12%)**.

Regarding claim 13, Grabowski et al. disclose the glass for covering electrodes according to claim 1, wherein the B₂O₃+SiO₂ content ranges from 25 to 40% **(claim 1; 18 + 12 = 30%)**.

Regarding claim 14, Grabowski et al. disclose the glass for covering electrodes according to claim 1, wherein the TiO₂+ZrO₂+La₂O₃+Ta₂O₅ content ranges from 1 to 7% **(claim 1. Choose 3% of La₂O₃ and 2% of TiO₂)**.

Regarding claim 15, Grabowski et al. disclose the glass for covering electrodes according to claim 1, wherein Al₂O₃ is present in the glass in an amount that is at least 1% and at most 8% **(Claim 1 choose 4%)**.

Allowable Subject Matter

Claims 6-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 6, the following is an examiner's statement of reasons for allowance: The prior art of record neither shows nor suggests a process including the combination of all the limitations as set forth in claim 6, and specifically wherein covering of transparent electrodes formed on a glass substrate comprising a front substrate, is carried out by coating and firing a powder of the glass for covering electrodes as defined in claim 1 could not be found elsewhere in prior art.

Regarding claim 7, the following is an examiner's statement of reasons for allowance: The prior art of record neither shows nor suggests a process including the combination of all the limitations as set forth in claim 7, and specifically wherein covering of transparent electrode electrodes formed on a glass substrate comprising a front substrate, is carried out by coating and firing the colored powder for covering electrodes as claimed in claim 5 could not be found elsewhere in prior art.

Regarding claim 8, the following is an examiner's statement of reasons for allowance: The prior art of record neither shows nor suggests a plasma display device including the combination of all the limitations as set forth in claim 8, and specifically

wherein the transparent electrodes are covered by the glass for covering electrodes as defined in claim 1 could not be found elsewhere in prior art.

Regarding claim 9, the following is an examiner's statement of reasons for allowance: The prior art of record neither shows nor suggests a plasma display device including the combination of all the limitations as set forth in claim 9, and specifically wherein at least one transparent electrode is covered by a colored glass obtained from the colored powder as claimed in claim 5 could not be found elsewhere in prior art.

Response to Arguments

Applicant's arguments filed January 18, 2005 have been fully considered but they are not persuasive.

The examiner has removed the rejection using Tanaka et al. U.S. Patent 6,160,345.

Regarding '847 the applicant asserts that '847 does not describe with sufficient specificity the glass for covering as claimed in claim 1. The examiner disagrees as one is allowed to choose the values as one would be allowed to choose the values within the applicants claimed ranges. The applicant asserts that '847 does not describe a glass for covering electrodes. The examiner notes that "for covering electrodes" is intended use language and is not given any patentable weight. The examiner has consulted with more senior examiners regarding sufficient specificity arguments and has been advised to maintain the rejection. The applicant has filed a 132 affidavit. The examiner notes that the affidavit is not addressed to a glass for covering electrodes but

a glass to cover electrodes in a plasma display panel paragraph 12. The examiner notes that claim 1 does not mention a plasma display panel. The examiner notes that glasses are often used just for insulating purposes and don't always need to be used for transparency.

Regarding U.S. '582, the applicant asserts that '582 contains errors that creates a cloud of uncertainty. The examiner notes that the Table 4 which has come into question uses the "~" character and not the "-" character, and this figure means approximately, so that if one chooses 90% for the PbO and then Approximately 10 which can be 7.5% for the SiO₂ and approximately 5% which can be 2.5% then one would add up to 100% and this is not erroneous or an inoperable range. The applicant points to 716.02, which I believe should be 716.07, inoperability of references. The examiner notes also that claim 1 does not rely on the high end of the range for PbO i.e. 85-90%. These quotes from 716.04.

Where the affidavit or declaration presented asserts inoperability in features of the reference which are not relied upon, the reference is still effective as to other features which are operative. *In re Shepherd*, 172 F.2d 560, 80 USPQ 495 (CCPA 1949).

If a patent teaches or suggests the claimed invention, an affidavit or declaration by patentee that he or she did not intend the disclosed invention to be used as claimed by applicant is immaterial. *In re Pio*, 217 F.2d 956, 104 USPQ 177 (CCPA 1954).

The applicant asserts that because 202 is made from a glass that contacts a roller body and does not cover electrodes that it should not be used to reject claim 1. The examiner notes that the language "for covering electrodes" is intended use

language. If the applicant would have written in claim 1 that the glass covers electrodes then that would be a different story, but the use of the word "for" in the preamble indicates intended use language.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kawana et al. U.S. Patent 5,972,564 discloses Alkali Development Type Photocurable Conductive Paste Composition and Plasma Display Panels Having Electrodes Formed Thereof. Sakoske U.S. Patent Application Publication 2004/0202795 A1 disclose Screen Printing Process (paragraph 32).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Glenn Zimmerman whose telephone number is (571) 272-2466. The examiner can normally be reached on M-W 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh D. Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Glenn Zimmerman



Vip Patel
Primary Examiner
AU 2879